

L-46

Department of Energy (DOE)
Medical, Environmental, and Radiological Safety
Programs in the Marshall Islands
1989-1991

I. Fiscal Year (FY) 1989 Program

- A. Medical - Brookhaven National Laboratory (BNL) will continue to provide medical surveillance of the 163 exposed persons of Rongelap and Utrik and will direct and fund treatment for those individuals referred to medical facilities outside the Marshall Islands for radiation relatable medical problems.
- B. Environmental Studies - Lawrence Livermore National Laboratory (LLNL) will update the Eneu (Bikini) dose assessment; continue to refine techniques and monitor results of remedial agricultural efforts; continue analysis to evaluate natural environmental processes which may favorably influence dose predictions; and refine certain data for Rongelap dose predictions.
- C. Radiological Safety - BNL will conduct wholebody counting and other bioassay procedures pertaining to the Rongelap and Utrik people. The Rongelap work will produce baseline data in anticipation of a possible resettlement of Rongelap Island, while the Utrik effort will serve to verify further previous findings, thus providing reassurance to that community that continued residence will produce no significant adverse health effects. The track-etch plutonium analysis is ongoing, with the University of Utah complementing the BNL effort and providing a check on past, current, and future analyses affecting Rongelap assessments.

II. FY 1990

The program for FY 1990 is essentially a continuation of the current year's work, except for certain environmental experiments which will be phased out as their objectives are met, and the radiological safety field effort which is expected to be completed early in the fiscal year.

John Rudolph's Files
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III. FY 1991

A. Medical

DOE will conduct and fund the Rongelap/Utrik medical program at essentially the current level until an orderly transition can be made which integrates it into the Marshall Islands health care system.

B. Environmental Studies

DOE will complete its analysis and report on samples taken in previous fiscal years. No additional field work will be conducted unless a request, accompanied by funding is received from the Republic of the Marshall Islands (RMI). Recommendations have been made for RMI funded programs which include sampling trips to Bikini, Enjebi, and other newly resettled areas to determine environmental concentrations of radionuclides and to evaluate the effectiveness of and refine remedial agricultural measures.

C. Radiological Safety

The Radiological Safety Program will be continued only to the level which maintains the basic capability in both people and equipment to conduct a field program of wholebody counting and other bioassay procedures. Sample processing and analysis will be funded to the extent needed to obtain and reduce data from the 1990 collections. DOE will use the field capability upon a funded request for technical assistance from RMI. The field program recommended for RMI funding is basically a biannual wholebody counting/bioassay mission to newly resettled atolls or islands.

This planned program recognizes the intent of Congress, as expressed in Public Law 99-239, to fund and conduct the medical surveillance and treatment of the exposed Rongelap and Utrik people. As to the environmental programs, DOE has gathered and analyzed data throughout the northern Marshalls which provide the basis for resettlement decisions at Bikini, Enewetak, and Rongelap Atoll. Recommendations have been made to the RMI Government regarding remedial agricultural measures, of proven effectiveness, which can reduce uptake of radionuclides into the food chain. Thus, the major work will be completed in FY 1990 with the analysis available in FY 1991. DOE participation in future environmental field programs after 1990 will be limited to the maintenance of a technical capability to support funded RMI requests. DOE plans to maintain this capability through FY 1991. Thereafter, it will not be available unless a funded request for support has been received from RMI in FY 1991.

IV. Funding Summary

A. Cofunding Proposal

The following program including cost sharing was proposed to RMI in September 1988. The program was accepted in principle while the sharing of costs using current RMI funding was not. (See letter O. de Brum to Rudolph - Attachment 1.)

FY 1990 - FY 1991

(\$000)

	<u>U.S.</u>	<u>RMI</u>	
Medical	1,200	0	
Wholebody Counting/Bioassay	500	500	
Environmental Assessment	750	750	
Logistical Support	700	700	
Radiological Education	25	25	
	<u>3,175</u>	<u>1,975</u>	Total: 5,150

The above proposal reflected a program that would continue environmental and radiological studies already begun as United States (U.S.) initiatives. This program has characterized the radiological conditions of the four atolls affected by U.S. test activities and would confirm previous determinations regarding the plutonium question for the Rongelap and Utrik people.

B. FY 1990 and FY 1991 Summary

The Department has revised its FY 1990 program to a level of \$5.0 million since no funding will be available from RMI. Funds for this program are contained in the Weapons Research and Development component of the Department's Atomic Energy Defense activities budget. In the absence of a funded request for technical services in FY 1991, we will reduce our effort in FY 1991 to approximately \$4.5 million. After FY 1991 the Department will only provide technical services for environmental assessments on a reimbursable basis.

The medical program will be continued as a direct DOE funded and managed effort. As the size of the exposed population decreases in the future, other means will be explored whereby the U.S. obligations to these people can be met at reduced costs with no reduction in the quality of surveillance and health care for radiation-related disorders.

Attachments 2 and 3 are estimated program funding requirements for FY 1990 and FY 1991 based on no funded requests from RMI. In the event RMI requests DOE technical support, the budget submission for FY 1991 will reflect the nature and extent of such requests.

3 Attachments

**REPUBLIC OF THE MARSHALL ISLANDS**

MAJURO, MARSHALL ISLANDS 96960 CABLE: REPMAR

October 7, 1988

FACSIMILE NUMBER: (202) 252-8051

Mr. John Rudolph
Office of Military Application, DP22.1
United States Department of Energy
Washington, D.C. 20545

Dear Mr. Rudolph:

I have the honor of responding to a proposal offered by the United States Department of Energy (DOE) for the provision of certain technical work during Fiscal Year 1990 to ameliorate the impact of the United States Nuclear Testing Program on the people of the Marshall Islands. The proposal was conveyed to the Government of the Republic of the Marshall Islands (RMI) in a meeting that took place in Honolulu on September 23, 1988. In the course of the meeting, DOE officials proposed that, for Fiscal Year 1990, RMI provide matching funding in the amount of \$1,975,000, which, when combined with equal funding from DOE, would pay for whole body counting and bioassay medical studies, environmental assessments establishing the long-range effectiveness of the preventative technologies that have been developed at Bikini Atoll, logistical support for DOE operations in the Marshall Islands, and a program of radiological education for the school children and public of the Marshall Islands. It was suggested that such funding might be derived from the annual proceeds of the RMI Nuclear Claims Fund made available pursuant to Section 1(a) of Article II of the Section 177 Agreement.

My government fully recognizes the importance of the proposed body of work. Such a program will serve to ensure the safety of citizens of RMI who, in the years ahead, choose to resettle Bikini Atoll, Rongelap Atoll, and Enjebi Island in the northern portion of Enewetak Atoll.

Nevertheless, my government is not in a position to provide the matching funding sought by the DOE. Whereas the "buy back" from DOE of technical assistance was contemplated when Section 1(a) of Article II of the Section 177 Agreement was originally negotiated, Section 103(j) of United States Public Law 99-239 subsequently required that the funding available under this section of the Section 177 Agreement be used for a health program

Mr. John Rudolph
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started by the United States Congress for the benefit of the four communities of the Marshall Islands most directly impacted by the U.S. Nuclear Testing Program. All proceeds generated from the Section 177 Fund pursuant to Section 1(a) or Article II of the Section 177 Agreement have been devoted exclusively to this health care program. Hence, my government will not be able to provide significant financial support to the technical work that the DOE plans to perform in the Marshall Islands during Fiscal Year 1990. Out of concern for the well-being of the people of Bikini, Enewetak, and Rongelap, it is our sincere hope that the United States Government will find sufficient funding for these activities until such time as these atolls have been safely resettled and monitoring of radiological health conditions is no longer necessary.

I would ask that the views expressed in this letter be conveyed to the United States Congress in the report on the Honolulu meeting.

Sincerely yours,



Oscar de Brun
Chief Secretary

ESTIMATED FISCAL YEAR 1990 TOTAL PROGRAM REQUIREMENTS			
(\$000)			
Operating	Capital	Equipment	Total
\$1,000		\$1,000	
-supported missions; medical outside the Marshall Islands			
sed patients.			
ental Studies			
and analysis from Bikini, Enewetak,			
r atolls as required to: refine			
eness of remedial techniques; deter-			
ironmental effects of radionuclide			
.			
ical Monitoring			
wholebody counting; conclude sample			
on and other bioassay analyses;			
rack-etch analysis technique			
lity assurance verification.			
al Support			
charter of vessel capable of multi-			
support; provide management of shipping,			
l transportation, and on-island support			
mission.			
Equipment			
shipboard medical van and related ship			
tions. Upgrade x-ray and other medical			
ratory equipment at Brookhaven National			
ry and Lawrence Livermore National			
ry.			
TOTALS:	\$4,900	\$100	\$5,000

ESTIMATED FISCAL YEAR 1991 PROGRAM REQUIREMENTS			
(\$000)			
Operating	Capital	Equipment	Total
\$1,000			\$1,000
\$1,500			\$1,500
400			400
\$1,600			\$1,600
\$4,500			\$4,500
TOTALS:			

Surveillance
-supported missions; medical
outside the Marshall Islands
used patients.

Mental Studies

of samples from various
acquired previously; maintain
every technical capability; no
tips.

Medical Monitoring

sample analysis; refine
analysis technique with the
ity of Utah; prepare reports;
laboratory technical capability;
sample collection or wholebody

ical Support
e ship charter in support of
program.

Equipment
irements.

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS
BILL, 1989

MAY 11, 1988 —Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. BEVILL, from the Committee on Appropriations,
submitted the following

REPORT

[To accompany H.R. 4567]

The Committee on Appropriations submits the following report in explanation of the accompanying bill making appropriations for energy and water development for the fiscal year ending September 30, 1989, and for other purposes.

INDEX TO BILL AND REPORT

	Bill	Report
I Department of Defense—Civil:		
Corps of Engineers—Civil:		
General investigations	2	8
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Flood control, Mississippi River and tributaries, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee	8	26
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II Department of the Interior:		
Bureau of Reclamation:		
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Construction program	8	47
Operation and maintenance	12	51
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General administrative expenses	14	54
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PLANT AND CAPITAL EQUIPMENT

Appropriation, 1988	\$1,495,899,000
Budget estimate, 1988	1,467,975,000
Compared	1,472,975,000
Appropriation, 1988	- 22,924,000
Budget estimate, 1988	+ 5,000,000

The appropriation recommended for Atomic Energy Defense Activities provides for seven principal programs: Weapons Activities; Nuclear Directed Energy Weapons; Inertial Confinement Fusion; Materials Production; Defense Waste and Environmental Restoration; Naval Reactors Development; and Other National Security Programs.

WEAPONS ACTIVITIES

This program provides for the research, development, engineering, testing, and production of all U.S. nuclear weapons; maintenance of reliable weapons for their stockpile life; and retirement and disposal of nuclear weapons from the stockpile.

The fiscal year 1989 recommendation will continue efforts to provide new technology to maintain a modern nuclear force, along with the design and development of new weapons systems in response to defense requirements. The budget included \$1,617,770,000 for Inertial Confinement Fusion (ICF) and \$285,000,000 for the Nuclear Directed Energy Weapons Program. The Committee has recommended that these programs be funded as separate categories.

The Committee recommendation for Weapons Activities totals \$3,813,171,000 of which \$3,164,845,000 is the Operating Expenses and \$648,326,000 is for Plant and Capital Equipment. This is \$5,000,000 more than the budget request and reflects an increase of \$13,766,000 compared to fiscal year 1988 appropriations. Weapons Activities are comprised of the following subcategories: Research and Development, Testing Activities, Production and Surveillance, and Program Direction.

RESEARCH AND DEVELOPMENT

The Committee recommendation for Research and Development totals \$1,010,182,000 which is \$5,000,000 more than the budget request and reflects an increase of \$16,781,000 from fiscal year 1988.

TESTING

The Committee recommendation for Testing Activities totals \$460,361,000 which is the budget request and is a decrease of \$13,097,000 compared to fiscal year 1988.

The Committee recommendation includes funding at the current level to continue the health and environmental programs on all the affected atolls of the Marshall Islands. The Department is directed to prepare a report on a coordinated plan for this effort for future years, including estimated costs and sources of funding.

PRODUCTION AND SURVEILLANCE

The Committee recommendation for Production and Surveillance totals \$2,251,228,000 which is the budget request and reflects an in-

PROGRAM DIRECTION

Program direction is funded at \$81,400,000 or the budget request.

NUCLEAR DIRECTED ENERGY WEAPONS

The Committee recommendation for Nuclear Directed Energy Weapons is \$245,000,000 which is \$40,000,000 less than the budget request and is a decrease of \$34,000,000 from fiscal year 1988.

INERTIAL CONFINEMENT FUSION

The Committee recommendation for Inertial Confinement Fusion (ICF) is \$163,770,000 which includes a recommendation of \$155,530,000 for operating expenses and \$8,240,000 for capital equipment.

The Committee is aware of the significant progress being made on inertial confinement fusion research. This research program is occurring at a more rapid rate than anticipated. In order to continue to achieve research success in an efficient manner, the Committee supports an independent review of the ICF program and results to date. This review would be the basis for developing recommendations for future ICF initiatives.

Based on the results included in the report provided by the Department and the University of Rochester, the Committee has included \$2,000,000 within the glass laser program for continued design engineering and development for an upgrade to the laser at the University of Rochester's Laboratory for Laser Light. The upgrade of this laser to a capability of 30,000 joules provides an opportunity to study ignition scaling, fuel-pusher erosion, preheating, and hydrodynamic instabilities. Also included in the glass laser program is \$10,900,000 for research program activities at the University of Rochester, \$16,800,000 for research program activities at the Naval Research Laboratory (NRL), and \$2,000,000 for research program activities at the Naval Research Laboratory (NRL).

Within the glass laser program, \$2,500,000 is included for the demonstration of the induced optical incoherence concept using the laser. Within the funds for capital equipment, \$700,000 is allocated for equipment at KMSF.

The allocation of operating funds for the major programs is as follows:

Category	Amount
Glass laser program	\$1,000,000
Can laser program	\$1,000,000
Fuel-pusher program	\$1,000,000
Supporting Activities	\$1,000,000
Total	\$4,000,000

RECOMMENDATION SUMMARY

Details of the Committee's recommendations, current program estimates and the budget request are shown in the following table: